

FY2006

UNITED STATES MILITARY  
ACADEMY  
WEST POINT, NEW YORK  
INSTALLATION ACTION PLAN

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## Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Installation Cleanup Program for an installation. The plan will identify environmental cleanup requirements at each site or area of concern, and propose a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, U.S. Army Environmental Center (USAEC), USMA, executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

**The following agencies contributed to the formulation and completion of this Installation Action Plan:**

Engineering and Environment, Inc.

NYSDEC

USAEC

West Point DPW

<i>Statement of Purpose</i> .....	1
<i>Table of Contents</i> .....	2
<i>Acronyms &amp; Abbreviations</i> .....	4
<b>INSTALLATION INFORMATION</b> .....	6
<b>CLEANUP PROGRAM SUMMARY</b> .....	7
<b>INSTALLATION RESTORATION PROGRAM</b>	
<i>IRP Summary</i> .....	10
<i>IRP Contamination Assessment</i> .....	11
<i>Previous IRP Studies</i> .....	12
<b>SITE DESCRIPTIONS</b>	
<i>WSTPT 01 PX LANDFILL</i> .....	16
<i>WSTPT 02 STADIUM LOT A LANDFILL</i> .....	17
<i>WSTPT 03 STADIUM LOT B LANDFILL</i> .....	18
<i>WSTPT 04 STADIUM LOT C LANDFILL</i> .....	19
<i>WSTPT 05 STADIUM LOT D LANDFILL</i> .....	20
<i>WSTPT 06 STADIUM LOT E LANDFILL</i> .....	21
<i>WSTPT 07A STADIUM LOT F LANDFILL</i> .....	22
<i>WSTPT 09 SKI SLOPE LANDFILL</i> .....	23
<i>WSTPT 10 POST SCHOOL LANDFILL</i> .....	24
<i>WSTPT 11 MOTORPOOL LANDFILL</i> .....	25
<i>WSTPT 11A MOTORPOOL E LANDFILL</i> .....	26
<i>WSTPT 15B HIGH SCHOOL LANDFULL</i> .....	27
<i>WSTPT 16 ORGANIC COMPOST LOT</i> .....	28
<i>WSTPT 35A CAMP PUCKNER LANDFILL</i> .....	29
<i>WSTPT 48 BLDG 706 PARKING LOT LANDFILL</i> .....	30
<i>Response Complete AEDB-R Sites</i> .....	31
<b>SCHEDULE</b>	
<i>Past/Projected Milestones</i> .....	32
<i>Schedule Chart</i> .....	32-1
<b>COST</b>	
<i>Prior/Current Year Funding</i> .....	34
<b>COMMUNITY INVOLVEMENT</b>	
<i>Restoration Advisory Board Status</i> .....	37
<b>MILITARY MUNITIONS RESPONSE PROGRAM</b>	
<i>MMRP Summary</i> .....	39

*MMRP Contamination Assessment* ..... 40

*Previous MMRP Studies*..... 40

**MMRP SITE DESCRIPTIONS**

*WSTPT-001-R-01 ARTILLERY FIRING RANGE* ..... 42

*WSTPT-003-R-01 BATTERY KNOX* ..... 43

*WSTPT-004-R-01 BATTERY KNOX-TD*..... 44

*WSTPT-007-R-01 BUFFALO SOLDIER FIELD* ..... 45

*WSTPT-008-R-01 FORT CLINTON*..... 46

*WSTPT-010-R-01 GREY GHOST HOUSING AREA* ..... 47

*WSTPT-011-R-01 NORTH ARTILLERY FIELD* ..... 48

*WSTPT-012-R-01 POST OUTDOOR PISTOL RANGE*..... 49

*WSTPT-013-R-01 SEACOAST BATTERY*..... 50

*WSTPT-015-R-01 SEIGE BATTERY*..... 51

*WSTPT-016-R-01 SEIGE BATTERY-TD* ..... 52

*WSTPT-017-R-01 TARGET HILL*..... 53

**MMRP SCHEDULE**

*Past/Projected Milestones* ..... 54

*Schedule Chart* .....54-1

**MMRP COST**

*Prior/Current Year Funding* ..... 55

## Acronyms & Abbreviations

<b>AEDB-R</b>	Army Environmental Database - Restoration (formerly DSERTS)
<b>ASP</b>	Ammunition Storage Point
<b>BD</b>	Blanket Drains
<b>BRAC</b>	Base Re-Alignment and Closure
<b>CC</b>	Compliance-Related Cleanup
<b>CMi (C)</b>	Corrective Measures Implementation (Construction)
<b>CMi (O)</b>	Corrective Measures Implementation (Operation)
<b>CMS</b>	Corrective Management Study
<b>CS</b>	Corrective Study
<b>DD</b>	Decision Document
<b>DES</b>	Design
<b>DPW</b>	Department of Public Works
<b>DSERTS</b>	Defense Site Environmental Restoration Tracking System (now called AEDB-R)
<b>ER,A</b>	Environmental Restoration, Army (formerly called DERA)
<b>FS</b>	Feasibility Study
<b>FY</b>	Fiscal Year
<b>GSA</b>	General Services Administration
<b>HRR</b>	Historical Records Review
<b>HSWA</b>	Hazardous and Solid Waste Amendments
<b>IAP</b>	Installation Action Plan
<b>IRA</b>	Interim Remedial Action
<b>IRP</b>	Installation Restoration Program
<b>LTM</b>	Long-Term Monitoring
<b>MACOM</b>	Major Command
<b>MC</b>	Munitions Constituents
<b>MEC</b>	Munitions and Explosives of Concern
<b>MMRP</b>	Military Munition Response Program
<b>MW</b>	Monitoring Well
<b>NPL</b>	National Priorities List
<b>NYSDEC</b>	New York State Department of Environmental Conservation
<b>OB/OD</b>	Open Burning/Open Detonation
<b>OEW</b>	Ordnance and Explosive Waste
<b>PA</b>	Preliminary Assessment
<b>POL</b>	Petroleum, Oil, Lubricants
<b>PX</b>	Post Exchange
<b>PY</b>	Prior Year
<b>RA</b>	Remedial Action
<b>RA(C)</b>	Remedial Action - Construction
<b>RA(O)</b>	Remedial Action - Operation
<b>RAB</b>	Restoration Advisory Board
<b>RC</b>	Response Complete
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RD</b>	Remedial Design
<b>REM</b>	Removal
<b>RFA</b>	RCRA Facility Agreement
<b>RI</b>	Remedial Investigation

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## Acronyms & Abbreviations

<b>RIP</b>	Remedy in Place
<b>RFI</b>	RCRA Facility Investigation
<b>ROD</b>	Record of Decision
<b>RRSE</b>	Relative Risk Site Evaluation
<b>SI</b>	Site Inspection
<b>STAS</b>	Stewart Army Subpost
<b>STR</b>	Skeet and Trap Range
<b>SWMU</b>	Solid Waste Management Unit
<b>USACE</b>	United States Army Corps of Engineers
<b>USAEC</b>	United States Army Environmental Center
<b>USAEHA</b>	United States Army Environmental Hygiene Agency
<b>USCG</b>	United States Coast Guard
<b>USEPA</b>	United States Environmental Protection Agency
<b>USMA</b>	United States Military Academy- West Point
<b>UST</b>	Underground Storage Tank
<b>UXO</b>	Unexploded Ordnance
<b>WSTPT</b>	West Point AEDB-R Abbreviation

**INSTALLATION LOCALE:** The United States Military Academy (USMA) is located in Orange County in the state of New York, on the west bank of the Hudson River approximately 45 miles north of New York City. The military reservation at West Point consists of 15,974 acres, with the main post comprising 2,520 acres. It is bounded by New York State Route 218, the Hudson River, the Village of Highland Falls and U.S. Route 9W. West Point is crossed by the Hudson Highlands, a belt of steep-walled knobbed ridges, irregular hills and mountains. USMA is a registered National Historic Landmark.

**INSTALLATION MISSION:** The current mission of USMA is to educate, train and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country and prepared for a career of professional excellence and service to the Nation as an officer in the United States Army.

**COMMAND ORGANIZATION:** US Army Garrison, West Point

**REGULATOR PARTICIPATION:**

**Federal:** U.S. Environmental Protection Agency, Region II

**State:** NYS Department of Environmental Conservation (NYSDEC) Central Office in Albany, New York.

**LEAD EXECUTOR:** Kansas City Corps of Engineers (LTM) New York District Corps of Engineers (LTM construction supervision and administration)

**NPL STATUS:** Non-NPL with RCRA Corrective Action

**RAB/TRC/TAPP STATUS:** A Community Relations Council and residential Mayor's meetings have been established. The availability of these two operating public forums and the limited remedial actions planned at USMA limit the need to establish a RAB at West Point.

**PROGRAM SUMMARIES:**

**IRP**

Contaminants of Concern: Petroleum/Oil/Lubricants, Heavy Metals

Media of Concern: Soil and Groundwater

Estimated date for RIP/RC: 2002

Funding to Date: (up to FY05): \$14,709,000

CTC: \$8,604,000

**MMRP**

Contaminants of Concern: UXO

Media of Concern: Soil

Estimated date for RIP/RC: 2047

Funding to Date: \$515,425

CTC: \$16,834,000

**BRAC and CC:** There are three Compliance Cleanup sites at West Point all involving leakage from underground petroleum storage tanks. There are no BRAC sites at West Point.

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## Cleanup Program Summary

**HISTORIC ACTIVITY:** USMA is an active U.S. Army Installation (MACOM). The USMA was officially established at West Point on 16 March 1802. The initial purpose of the Academy was to obtain military technicians for all branches of the military service, to encourage the study of military art nationally, raise the level of training of the militia and to encourage the practical study of every science.

Lands formerly known as Stewart Army Subpost (STAS), are located approximately 14 miles northwest of the USMA, Orange County, Town of New Windsor, New York. STAS provided overflow family housing for West Point and included facility and community support to residents and tenants. STAS divestiture, as follows: a) 19 Nov 99, USMA transferred 263.86 acres to the Town of New Windsor, Orange County, New York; b) 29 Sep 99, USMA transferred 40.4 acres to the 77th Regional Support Command (Army Reserve); c) 3 Feb 00, USMA transferred 78.63 acres & 11.69 acres (easement) to the United States Marine Corps Reserve Mag 49, Det B.

In 1961, West Point was designated a National Historical Landmark included in the National Register of Historic Places and protected by Executive Order 11593.

**CURRENT ACTIVITY:** USMA has 29 sites (14 of these sites listed under AEDB-R are not active) grouped into 6 projects under the IRP. Landfills account for 20 of these sites. These landfills were used from the 1940s to 1980s for the disposal of municipal solid waste, construction and demolition debris and land clearing debris. Analytical results for the leachate samples from several of the landfills have exhibited heavy metals constituents. The other projects include: a former Skeet & Trap Range located in the Camp Buckner wetlands where lead deposits are of concern (WSTPT-44); a former impact area at Crow's Nest where Ordnance & Explosives Waste (OEW) is present (WSTPT-45); and the closure of several abandoned underground storage tanks (USTs) (WSTPT- 46 and 47).



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## Cleanup Program Summary

### **PROGRAM PROGRESS:**

#### **IRP:**

*Present:* In FY 05 LTM of the landfills was continued to include the 5<sup>th</sup> year of groundwater monitoring, repair and maintenance of landfill caps and monitoring wells, cleaning of drainage swales and repair to leachate collection systems. A 5 year data review and evaluation is being accomplished.

*Future:* Meet and review 5 year Data Evaluation Report with the NYSDEC to discuss reducing sampling frequency and time-frame for sites' closure (e.g. discontinue sampling).

**MMRP:** The Army's Closed, Transferring, and Transferred (CTT) Range Inventory Program began in 2001 to identify old ranges to be cleaned up in the MMRP. The West Point CTT Inventory was completed in 2004 and identified several sites eligible for the MMRP. In January 2005 West Point received a draft Historical Records Review (HRR) that was a more in depth study of the sites identified in the CTT inventory. Sites identified in the report include property controlled by West Point, Palisades Interstate Park, Town of Phillipstown, and the Hudson River. The Army Environmental Center (AEC) has notified West Point that they have funding available to conduct limited field investigations in FY 05.

# US Military Academy West Point

## INSTALLATION RESTORATION PROGRAM

**STATUS:** Non-NPL with RCRA corrective action.

**AEDB-R SITES/SITES RC:** 29/14

**AEDB-R SITE TYPES:**

1	Firing Range	2	UST
25	Landfills	1	Unexploded Munitions/Ordnance

**CONTAMINANTS OF CONCERN:** Petroleum/Oils/Lubricants, Heavy Metals

**MEDIA OF CONCERN:** Groundwater, Soil

**COMPLETED REM/IRA/RA:**

REM - UST removals (FY94) (WSTPT-49, \$50K)  
 IRA - Install Leachate Collection Systems at 3 Landfills (FY98)  
 IRA - Consolidate 2 Landfills (FY95-6 WSTPT-15A, \$475K)+(FY97-98, WSTPT-13, \$315K)  
 IRA - Landfill drainage improvements (FY96) (WSTPT - 7a + 10, \$140K)  
 IRA - Upgrade Leachate Collection Systems (FY96) (WSTPT - 7a +10, \$100K)  
 CMI - Install Cap at Post School (FY 97) (WSTPT-10, \$362K)  
 CMI - Install Cap and Drainage (FY 98-99) (WSTPT-4, 6 & 7a, \$1,247K)  
 CMI - Install Cap and Drainage (FY 99, WSTPT-9, \$167K)+(FY 99, WSTPT-11, \$1,410K)  
 CMI - Install Cap and Drainage (FY 00, WSTPT-9, \$301K)+(FY 00,WSTPT-11a, \$539K)  
 CMI - Install Cap/Leachate Collection (FY 01, WSTPT-9 & 10, 30K + 146K)  
 CMI - Install Cap and Drainage (FY 02, WSTPT-2 & 3, \$538K)

**IDENTIFIED POSSIBLE REM/IRA/RA:** None

**TOTAL ERA FUNDING:**

PRIOR YEAR (up to FY04):	\$ 14,493,000
CURRENT (FY05):	\$ 216,000
FUTURE (FY06+):	\$ 8,604,000

**DURATION OF IRP:**

Year of IRP Inception:	1991
Year of RA Completion:	2002
Year of IRP Completion:	2029

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## IRP Contamination Assessment

**INITIATION OF THE IRP:** In November 1988, the United States Military Academy submitted a RCRA Part B permit application to the USEPA for hazardous waste storage and a Subpart X permit for an open burn/open detonation (OB/OD) site. USMA is considered a large quantity generator of hazardous waste. Accumulated hazardous waste is moved to a central storage area where it is staged prior to shipment for up to 90 days. In December 1988, the application for the container storage facility was rescinded by USMA and the container storage sites underwent closure inspection and testing by the EPA under “Closure Prior to Loss of Interim Status.” Although the Part B permit had been rescinded, the Corrective Action provisions remain per the 1984 Hazardous and Solid Waste Amendments (HSWA) Section 3004 (h). Therefore, USMA remains under interim status while Long Term Monitoring is conducted.

In November 1990, the US Army Environmental Hygiene Agency (USAEHA, now USACHPPM) conducted a survey of Solid Waste Management Units (SWMUs) at USMA pursuant to RCRA corrective action requirements. The USAEHA survey identified 16 inactive landfills at USMA. USMA subsequently identified four additional inactive landfills. The landfills are all under LTM.

In 1991, a Preliminary Assessment was initiated prior to the replacement of a natural gas line that crossed the Crow’s Nest area of Storm King Mountain. Research for the project revealed that the Crow’s Nest area was a former artillery impact area. The project to replace the gas line was terminated following the discovery of ordnance and explosive waste (OEW) along the proposed gas line. A Remedial Investigation (limited surface sweep) discovered 75 suspect OEW, 15 of which were on adjacent park property. The Army Safety Office assigned the site a RAC 2 ranking which dropped its priority on the IRP Workplan.

In 1992, four known abandoned tanks located at West Point were added to the inventory of abandoned tanks (WSTPT-46) slated for locating and removal at STAS. In 1992, an investigation was initiated to assess the impact of lead deposition in a wetland from a formerly used Skeet and Trap Range (STR) at Camp Buckner.

Cragston Landfill (WSTPT-14) is a sanitary landfill undergoing RCRA Subtitle D closure outside the IRP. The South Fill (WSTPT-12), Hospital Parking Lot (WSTPT-23A) and the Stadium Lots G (WSTPT-07B) and H (WSTPT-07C) landfills are listed on the AEDB-R database but no further response action is planned, since records indicate they were used for clean construction and demolition debris and no releases are evident.

**DESCRIPTION OF MAJOR IRP CONCERNS:** USMA has 29 sites (14 of these sites listed under AEDB-R are not active) grouped into 6 projects under the IRP. Landfills account for 20 of these sites. These landfills were used from the 1940s to 1980s for the disposal of municipal solid waste, construction and demolition debris and land clearing debris. Analytical results for the leachate samples from several of the landfills have exhibited heavy metals constituents. The other projects include: a former STR located in the Camp Buckner wetlands where lead deposits were of concern (WSTPT-44); a former impact area at Crow’s Nest where OEW is present (WSTPT-45); and the closure of several abandoned underground storage tanks (USTs) (WSTPT- 46 and 47).

**CLEANUP EXIT STRATEGY:** Complete fifth year of LTM. Complete required five year review of data-evaluation report with NYSDEC. Propose reduced sampling frequency and time-frame for sites' closure (e.g. discontinue sampling).

## ***Previous Studies***

### **No Date**

- EA Engineering, Science and Technology; Decision Document Camp Buckner Skeet and Trap Range
- DHPW EMD; Decision Document for the Post School Landfill
- DHPW EMD; Decision Document for Lots C, E, and F

### **1994**

- Woodward Clyde Federal Services; Draft Work Plan and Chemical Data Acquisition Plan, RCRA Facility Assessment of Ten Landfills, January
- LAW Engineering and Environmental Services; Subsurface Investigation Report of 6 Landfills, July

### **1995**

- EA Engineering, Science and Technology; Project Plans for Expanded RCRA Facility Assessment of Four Landfills, March
- Woodward Clyde Federal Services; RCRA Facility Assessment (RFA) of Ten Landfills Report, June
- EA Engineering, Science and Technology; Project Plans for the Phase II Remedial Investigation and Leachate Management Analysis of Six Landfills, June
- EA Engineering, Science and Technology; Remedial Investigation at Building 2228 Fuelling Facility, August

### **1996**

- EA Engineering, Science and Technology; Phase II Investigation Report of Six Landfills, August
- EA Engineering, Science and Technology; Phase II Leachate Management Analysis of Six Landfills, August
- EA Engineering, Science and Technology; Quality Control Summary Report of Six Landfills, August
- EA Engineering, Science and Technology; Expanded RCRA Facility Assessment of Four Landfills, September
- EA Engineering, Science and Technology; Quality Control Summary Report of Four Landfills, September
- IT Corporation; USMA Landfill Remediation Contract No. DACAW45-94-D-0054 Delivery Order No. 19, September
- Malcolm Pirnie, Inc.; Design Concept for Post School Landfill Closure, October

### **1997**

- DHPW EMD; Decision Document for the Village Farm Landfill; April
- Malcolm Pirnie, Inc.; RCRA Facility Investigation of Ten Landfills, June

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## IRP Contamination Assessment

- Malcolm Pirnie, Inc.; Post School Landfill Closure Design, Design Analysis Report, July
- Malcolm Pirnie, Inc., Post School Landfill Closure Design Contract Specifications, July

### 1998

- Louis Berger & Associates, Inc.; Design Analysis Report for Michie Stadium Parking Lot Landfills (C, E & F), July
- Malcolm Pirnie, Inc., Contract Specifications for Michie Stadium Parking Lot Landfills (C, E & F), July
- Malcolm Pirnie, Inc.; Design Analysis Report for Michie Stadium Parking Lot Landfills (C, E & F), July
- EA Engineering, Science and Technology; Design Analysis Report for Motor Pool Landfill Closure, August

### 1999

- IT Corporation; The Final Report Addendum for Village Farm Landfill Remediation, January
- DHPW EMD; Decision Document for the Motorpool Landfill, January
- EA Engineering, Science and Technology; Design Analysis Report Ski Lot Landfill Closure, Sparks, June
- EA Engineering, Science and Technology; Design Analysis Report Motor Pool East Landfill Closure, June
- DHPW EMD; Decision Document for the Motorpool East Landfill, October
- Malcolm Pirnie, Inc.; Ten Landfills RCRA Facility Investigation Phase II Groundwater Monitoring Draft Final Report, December

### 2000

- Malcolm Pirnie, Inc.; 100% Completion Phase Design Analysis Report, Construction Cost Estimate and Contract Specifications for Michie Stadium Parking Lot Landfills (C, E, & F), February

### 2001

- EA Engineering, Science and Technology; Sampling and Analysis Plan for Long-Term Monitoring and Maintenance Program at 15 Landfills, December

### 2002

- DHPW EMD; Decision Document for the 12,000 Gallon UST at STAS, March
- EA Engineering, Science and Technology; Data Summary Report for Year 2001 LTM Maintenance Project at 15 Landfills, March
- EA Engineering, Science and Technology; Engineering Inspection Study for the Year 2002 LTM Maintenance Project at 15 Landfills, June
- EA Engineering, Science and Technology; Data Summary Report for Year 2002 LTM Maintenance Project at 15 Landfills, July

### 2003

- EA Engineering, Science and Technology; Data Summary Report for Year 2003 LTM Maintenance Project at 15 Landfills, July
- DHPW EMD; USMA Installation Action Plan, November

### 2004

- EA Engineering, Science and Technology; Data Summary Report for Year 2004 of the LTM and Maintenance Program at 15 Landfills, August

### 2005

- EA Engineering, Science and Technology; Monitoring Well and Subsidence Repairs at Multiple Landfill Locations and Landfill Maintenance, January

# US Military Academy West Point

## INSTALLATION RESTORATION PROGRAM

### SITE DESCRIPTIONS



# WSTPT-01 PX LANDFILL

## SITE DESCRIPTION

The Post Exchange (PX) Landfill is part of the 10 Landfill Investigation Report and is a 2-3 acre landfill located under the parking lot at the former Post Exchange. This was the installation landfill for domestic waste during the 1940s. The pit and area methods of landfilling were used at this location. The landfill is closed, covered and paved. A parking lot and the former PX service station now cover part of the site. Although leachate seeps were observed at this site in the past, recent engineering inspections have detected no seeps.

NYSDEC requested additional sampling of this site in March 1998. The additional sampling was performed and a supplement to the 10 Landfill Investigation was submitted to NYSDEC in Jan 00. The supplement recommended no further action at the Landfill based on sample results. No decision document was prepared because no remedial action was required. The PX Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

## CLEANUP STRATEGY

Long-term monitoring will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years. The landfill is scheduled to be resurfaced in FY06.

## STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**  
Surface Water, Groundwater

PHASES	Start	End
RFA.....	199011.....	199104
CS.....	199208.....	199506
RFI/CMS.....	199604.....	199912
LTM.....	200109.....	202906

**RC: 199912**

# WSTPT-02

## STADIUM LOT A LANDFILL

### SITE DESCRIPTION

The Michie Stadium Lot A Landfill is part of the 10 Landfill Investigation Report and is located west of Michie Stadium. This 0.6-acre landfill was used approximately from 1952-1954. The pit and trench methods were used. The landfill is closed and completely paved. A cap and drainage system improvements were constructed in FY02. The site is now used as a parking lot. Although leachate seeps were observed at this site in the past, recent engineering inspections have detected no seeps. Restoration of the landfill cap was completed in FY03.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Surface Water, Groundwater

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199208 .....	199506
RFI/CMS.....	199604 .....	199706
DES .....	199809 .....	200010
CMI(C).....	200109 .....	200207
<b>LTM .....</b>	<b>200208 .....</b>	<b>202906</b>

**RC: 200207**

# WSTPT-03 STADIUM LOT B LANDFILL

## SITE DESCRIPTION

WSTPT-03, which was part of the 10 Landfill Project, is located west of Michie Stadium; access is from Stony Lonesome Road. This 0.3-acre landfill reportedly received refuse in 1954. The pit and trench methods were used. The landfill is closed and completely paved. A cap and drainage system improvements were constructed in FY02. The site is now used as a parking lot. Although leachate seeps were observed at this site in the past, recent engineering inspections have detected no seeps. Restoration of the landfill cap was completed in FY03.

## CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

## STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199208 .....	199506
RFI/CMS.....	199604 .....	199706
DES .....	199809 .....	200010
CMI(C).....	200109 .....	200207
LTM .....	200208 .....	202906

**RC: 200207**

# WSTPT-04 STADIUM LOT C LANDFILL

## SITE DESCRIPTION

WSTPT-04 was part of the 10 Landfill Project and is located west of Michie Stadium; access is from Stony Lonesome Road. This 1.6 acre landfill was used approximately between 1955 and 1956. The pit and trench methods were used. The landfill is closed and partially paved. The site is now used as a parking lot. Although leachate seeps have been identified at this site in the past, recent engineering inspections have detected no seeps.

Storm water upgrade project was completed in FY01 to reduce cap deterioration and manage storm water run-off to prevent infiltration of water into the landfill mass. WSTPT-04 has been included in USMA's Sampling and Analysis Plan for Long-term Monitoring and Maintenance and groundwater sampling is conducted at this site.

## CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

## STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199208 .....	199506
RFI/CMS.....	199604 .....	199707
DES.....	199609 .....	200004
CMI(C).....	199901 .....	200107
<b>LTM.....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 200107**

# WSTPT-05 STADIUM LOT D LANDFILL

## SITE DESCRIPTION

WSTPT-05, which was part of the 6 Landfill project, is located west of Michie Stadium; access is from Stony Lonesome Road. This 2 acre landfill was active between 1956 and 1958. The pit and trench methods were used. The site is now used as a parking lot. A perimeter drain has been installed. Although leachate seeps have been identified at this site in the past, recent engineering inspections have detected no seeps.

WSTPT-05 has been included in USMA's Sampling and Analysis Plan for Long-term Monitoring and Maintenance and groundwater sampling is conducted at this site.

## CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

## STATUS

**RRSE:** Medium

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**  
Groundwater

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011	.....199104
CS.....	199107	.....199407
RFI/CMS.....	199408	.....199608
<b>LTM.....</b>	<b>200109</b>	<b>.....202906</b>

**RC: 199701**

# WSTPT-06

## STADIUM LOT E LANDFILL

### SITE DESCRIPTION

WSTPT-06, which was part of the 10 Landfill Project, is located west of Michie Stadium; access is from Stony Lonesome Road. This 4 acre landfill was used approximately from 1952 - 1954. The pit and trench methods were used. The landfill is closed and completely paved. The site is now used as a parking lot. A cap and drainage system improvements were constructed in FY02. Leachate seeps have been identified at this site in the past and a leachate collection system was installed in FY01. The system will be evaluated for effectiveness.

A cap and drainage improvement design was initiated in FY 96 and was completed in FY99. A Storm Water upgrade project was completed in FY01. WSTPT-06 has been included in USMA's Sampling and Analysis Plan for Long-term Monitoring and Maintenance and groundwater sampling is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199208 .....	199506
RFI/CMS.....	199604 .....	199706
DES .....	199609 .....	200004
CMI(C).....	199901 .....	200107
<b>LTM.....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 200107**

# WSTPT-07A

## STADIUM LOT F LANDFILL

### SITE DESCRIPTION

The Michie Stadium Lot F Landfill, which was part of the 6 Landfill Investigation Report, is located southwest of Michie Stadium; access is from Stony Lonesome Road. This three-acre landfill was used primarily in 1965. The pit and trench methods were used. The landfill is closed and paved. A storm water upgrade project was completed in FY01. The site is now used as a parking lot. Leachate seeps have been identified at this site in the past and a leachate collection system was installed in FY01. Leachate seeps investigations and repair of blanket drains (BD-1, BD-2) were completed in FY03. The Michie Stadium Lot F Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

The collection system was upgraded in FY04. Now, seeps are breaking out away from the collections system. USMA will evaluate new collection strategy.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** Medium

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199107 .....	199407
RFI/CMS.....	199408 .....	199608
DES .....	199609 .....	200004
IRA.....	199510 .....	199707
CMI(C).....	199901 .....	200107
<b>LTM .....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 200107**

# WSTPT-09 SKI SLOPE LANDFILL

## SITE DESCRIPTION

WSTPT-09, which was part of the 6 Landfill project, is located adjacent to the ski lodge; access is from NYS Route 218. This 0.7 acre landfill was used approximately between 1965 and 1974. The pit and area methods were used for disposal of sanitary and construction wastes. The landfill is closed and completely paved. The site is now used as a parking lot. A leachate collection system was installed in FY00. Sediments in an adjacent stream have been discolored by leachate. Although leachate seeps have been identified at this site in the past, recent engineering inspections have detected no seeps.

A cap and drainage system improvements were constructed and completed in FY01. WSTPT-09 has been included in USMA's Sampling and Analysis Plan for Long-term Monitoring and Maintenance and groundwater sampling is conducted at this site.

## CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

## STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199107 .....	199407
RFI/CMS.....	199408 .....	199608
DES .....	199709 .....	199905
IRA.....	199604 .....	199604
CMI(C).....	200009 .....	200107
<b>LTM .....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 200107**



# WSTPT-10

## POST SCHOOL LANDFILL

### SITE DESCRIPTION

The Post School Landfill, which was part of the 6 Landfill Investigation Report, is located adjacent to the West Point Elementary School. Access is from the school parking lot or Barry Road. This 2.5-acre landfill was used approximately from 1964 - 1969. The pit and area methods were used. The landfill is closed and vegetated. The site is used as a playing field for the school and youth activities center. Although leachate seeps have been identified at this site in the past, recent engineering inspections have detected no seeps.

In 1998, a leachate collection tank was installed and upgraded. Sediments in an adjacent stream have been discolored by leachate. Differential settling and poor drainage had made the field unusable. The perimeter drainage swale and leachate collection system have been upgraded as an interim remedial action. A cap and drainage improvement design was finalized in FY97 and implemented in FY98. The Post School Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** Medium

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199107 .....	199407
RFI/CMS.....	199408 .....	199608
DES .....	199609 .....	199708
IRA.....	199603 .....	199604
CMI(C).....	199709 .....	199905
<b>LTM .....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 199905**

# WSTPT-11

## MOTORPOOL LANDFILL

### SITE DESCRIPTION

The Motor Pool Landfill, which was part of the 6 Landfill Investigation Report, is located east of the Motor Pool fuel distribution system; access is from Reynolds Road. This 4.5-acre landfill was used from approximately 1964-1969. The pit and fill method was used for disposal of sanitary refuse. The landfill is now used as a parking lot for motor pool vehicles. In FY99, the cap was enhanced and drainage controls were installed.

Leachate seeps have been identified at this site in the past. A leachate collection system was installed in FY01 to remedy a seep down gradient of the landfill. Recent engineering inspections have identified that the seep in the vicinity of monitoring well 95LS-02 has increased and additional investigation into the source of the seep was performed in FY03. The results of the investigation confirmed that the existing leachate collection system was inadequate and a new design was proposed. USMA plans to install a new leachate collection system in FY06 (funded FY05). The Motor Pool Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** Medium

**CONTAMINANTS:** Metals, suspected POL

**MEDIA OF CONCERN:**  
Groundwater, Surface Water

PHASES	Start	End
RFA.....	199011	199104
CS.....	199108	199407
RFI/CMS.....	199408	199807
DES.....	199709	199808
CMI(C).....	199902	200103
LTM.....	200109	202906

**RC: 200103**

# WSTPT-11A

## MOTORPOOL EAST LANDFILL

### SITE DESCRIPTION

The Motor Pool East Landfill, which was part of the 4 Landfill Investigation Report, is located west of the Motor Pool Maintenance Buildings (Building 793/795). This 1.7-acre landfill was operated from 1964 to 1969 and reportedly received construction and demolition debris on its north side and sanitary waste on its south side.

The landfill was covered and paved in 2002. The site is now used as a parking lot by the Motor Pool. During construction of the cover, a leachate seep was observed emanating from the site. A cap and drainage system improvements were designed, constructed and completed in FY02. The Motor Pool East Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** High  
**CONTAMINANTS:** Metals  
**MEDIA OF CONCERN:**  
Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199409 .....	199609
RFI/CMS.....	199409 .....	199812
DES.....	199709 .....	200108
CMI(C).....	200104 .....	200109
<b>LTM.....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 200109**

# WSTPT-15B HIGH SCHOOL LANDFILL

## SITE DESCRIPTION

The High School Landfill, which was part of the 10 Landfill Investigation Report, is located on land deeded to the Town of Highlands School District (approximately five miles from the main post); access comes from Morgan Farm Road and Route 9W. The landfill consists of two separate fill areas: (1) the playing field, west of the school building, and (2) the track, southeast of the school building.

Although the landfill is located on land deeded to the Town of Highland Falls School District, USMA as Primary Responsible Party for disposal of waste at the landfill is required to maintain the site in the IRP LTM Program. In FY04, due to settling, half the landfill was brought back up to grade.

## CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

## STATUS

**RRSE:** Medium

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**  
Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199408 .....	199509
<b>LTM.....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 199603**

# WSTPT-16

## ORGANIC COMPOST LOT

### SITE DESCRIPTION

The Organic Compost Landfill, was part of the 6 Landfill Investigation Report and is located northwest of Building 743; access is from Garrard Road. This 0.5 acre landfill was used in the 1960s for disposal of construction debris. More recently, the site had been used for composting of organic material including leaves, mulch, tree limbs and grass cuttings. The landfill is closed and currently used as a lumber storage yard. A leachate tank was installed at the site. The landfill cover was initially tarred and chipped, but was resurfaced in FY05. Although leachate seeps have been identified at this site in the past, recent engineering inspections have detected no seeps.

The Organic Compost Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** High

**CONTAMINANTS:** Metals, Nitrates

**MEDIA OF CONCERN:**  
Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011	199104
CS.....	199107	199609
IRA.....	199103	199103
<b>LTM.....</b>	<b>200109</b>	<b>202906</b>

**RC: 199609**

# WSTPT-35A

## CAMP BUCKNER LANDFILL

### SITE DESCRIPTION

The Camp Buckner Landfill was part of the 10 Landfill Investigation Report and is located in the reservation area of the installation, at Camp Buckner. Access is from Patton Road, the main road into Camp Buckner, which intersects with Route 293. This 1.3-acre landfill was used in the 1970s and determined to be composed of construction and demolition debris. There are two small ponds north of the landfill; one is adjacent to the landfill and the other is approximately 150 feet from the landfill. The landfill is closed and covered with packed gravel and stone. The site is now used as a parking lot. In FY04, due to settling, the landfill was brought back up to grade.

The Camp Buckner Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and cap maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** High

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**

Groundwater, Surface Water

<b>PHASES</b>	<b>Start</b>	<b>End</b>
RFA.....	199011 .....	199104
CS.....	199208 .....	199506
RFI/CMS.....	199604 .....	199912
<b>LTM .....</b>	<b>200109 .....</b>	<b>202906</b>

**RC: 199912**

# WSTPT-48

## BLDG. 706 PARKING LOT LANDFILL

### SITE DESCRIPTION

The Bldg. 706 Parking Lot Landfill, was part of the 4 Landfill Investigation Report, is located next to Building 706 (Maintenance Facility); access is from Stony Lonesome Road. The period of usage is unknown but is probably in the 1952-1956 time frame, based on surrounding sites (Michie Stadium Lots A-C). The one-acre landfill is now closed, paved and used as a parking lot. The landfill was resurfaced in FY01. The Bldg. 706 Parking Lot Landfill has been included in USMA's Sampling and Analysis Plan for LTM and maintenance and groundwater sampling is conducted at this site.

### CLEANUP STRATEGY

Long-term monitoring and maintenance will continue. In FY06, USMA will propose to regulators to reduce sampling frequency to every five years.

### STATUS

**RRSE:** Medium

**CONTAMINANTS:** Metals

**MEDIA OF CONCERN:**  
Groundwater, Surface Water

PHASES	Start	End
RFA.....	199409 .....	199609
LTM.....	200109 .....	202906
<b>RC: 199609</b>		

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<b><u>AEDB-R #</u></b>	<b><u>TITLE</u></b>	<b><u>RC DATE</u></b>
WSTPT-07B	STADIUM LOT G LANDFILL	198412
WSTPT-07C	STADIUM LOT H LANDFILL	199011
WSTPT-08	PROFESSOR'S ROW LANDFILL	199506
WSTPT-12	SOUTH FILL	198412
WSTPT-12A	WASHINGTON GATE LANDFILL	199810
WSTPT-14	Cragston Landfill	199104
WSTPT-15A	MORGAN FARM LANDFILL	199605
WSTPT-23A	HOSPITAL PARKING LOT LANDFILL	198412
WSTPT-44	SKEET AND TRAP RANGE	199801
WSTPT-45	CROW'S NEST AREA	199404
WSTPT-47	ASP LANDFILL	199703
WSTPT-49	USTS AT BUILDING 505	199412
WSTPT-50	BLDG 632 NAPTHA TANKS	199409



## PAST MILESTONES

USMA submitted RCRA Part B Application		Nov 88
USMA rescinded RCRA Application		Dec 88
PA/SI S	WMU Study by USAEHA	Nov 90
Phase I RI	6 Landfill Work Plans Issued	Jul 91
PA/SI	Crow's Nest Gas Line Survey	Sep 91
Phase I RI	Skeet and Trap Range Initiation	Jan 92
SI	10 Landfill RFA Initiation	Aug 92
Phase II RI	Skeet and Trap Range Initiation	Sep 93
RI	Crow's Nest Limited Sweep	May 94
IRA	Tank Closures of WSTPT 46&47	May 94
Phase I RI	6 Landfill Finalized	Jul 94
RFA	4 Landfill RFA Initiation	Sep 94
Phase II RI	6 Landfill Award	Sep 94
IRA	Rapid Response Contract Award through Omaha District	Sep 95
IRA, Phase I RI	10 Landfill RFA Finalized	Jun 95
IRA, Phase II RI	Skeet and Trap Range Finalized	Nov 95
IRA, RFI	Begin at 10 Landfill	Mar 96
DD	Begin at Skeet and Trap Range	Mar 96
RD	Begin at Post School	May 96
RFA	4 Landfill RFA Finalized	Sep 96
Phase II RI 6	Landfill Finalized	Aug 96
IRA	Complete at 6 Landfill	Mar 96
RD	Begin for Michie Lots C, E, &F	Aug 96
DD	Complete at Skeet/Trap Range (WSTPT-44)	Apr 97
RFI	Finalize at 10 Landfill	Jun 97
CMS	Finalize at Post School (WSTPT-10)	Jul 97
CMI	Begin at Post School (WSTPT-10)	Mar 98
CMS	Begin at Motorpool, Motorpool East and Ski Slope LFs (WSTPT-11, 09, 11A)	Sep 97
CMS	Complete at Motorpool Landfill	Aug 98
IRA	Village Farm Landfill (WSTPT 13)	Nov 98
CMI	Begin at Motorpool Landfill (WSTPT-11)	Feb 99
CMI	Begin at Michie Lot Landfills C, E&F	Mar 99
CMI	Complete at Post School (WSTPT-10)	Nov 98
DES	Initiate at Michie Lots A (WSTPT-02), B (WSTPT-03)	Sep 98
CMI	Complete at Motorpool Landfill (WSTPT-11)	Sep 99
RFI	Response to Regulators Questions – 10 Landfill Report	Dec 99
CMI	Begin Ski Lot Landfill (WSTPT-09)	Sep 00
CMI	Begin Motorpool East Landfill (WSTPT-11A)	Apr 01
CMI	Complete Ski Lot Landfill (WSTPT-09)	Jul 01
CMI	Complete at Michie Lot Landfills C, E & F	Jul 01
CMI	Complete Motorpool East Landfill (WSTPT-11A)	Sep 01
CMI	Begin Michie Lot Landfill A (WSTPT-02)	Sep 01
CMI	Begin Michie Lot Landfill B (WSTPT-03)	Sep 01

## Schedule

LTM	Sampling and Analysis Plan for LTM & Maintenance	Dec 01
CMI	Complete Michie Lot Landfill A (WSTPT-02)	Jul 02
CMI	Complete Michie Lot Landfill B (WSTPT-03)	Jul 02
LTM	Cap Maintenance on Organic Compost Landfill (WSTPT-16)	Sept 04
LTM	Cap Maintenance on H,S. Landfill (WSTPT-15B)	Sept. 04
LTM	5 Year Data Evaluation	Aug 05

### FUTURE MILESTONES

Estimated Completion Date of IRP at Installation: 2029

### PROJECTED MILESTONES

*ROD/DD Approval Dates:* 2002

*Construction Completion:* 2002

*Completion Date of all RA(C) Activities:* 2002

*Completion Date of IRP (including LTM phase):* 2029

# USMA IRP SCHEDULE

(Based on current funding constraints)

AEDB-R #	PHASE	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
WSTPT-01	LTM										202906
WSTPT-02	LTM										202906
WSTPT-03	LTM										202906
WSTPT-04	LTM										202906
WSTPT-05	LTM										202906
WSTPT-06	LTM										202906
WSTPT-07A	LTM										202906
WSTPT-09	LTM										202906
WSTPT-10	LTM										202906
WSTPT-11	LTM										202906
WSTPT-11A	LTM										202906
WSTPT-15B	LTM										202906
WSTPT-16	LTM										202906
WSTPT-35	LTM										202906
WSTPT-48	LTM										202906

PRIOR YEAR FUNDING

<b>FY 91</b>	RI/FS (WSTPT-46 14 USTs)	46K	
	Phase I RI (6 Landfill)	130K	\$176K
<b>FY 92</b>	Phase I RI (Skeet and Trap Range)	212K	
	Phase I RI (6 Landfill)	96K	
	Phase I RI (10 Landfill)	282K	
	RI/FS (USTs at USMA and STAS)	25K	\$615K
<b>FY 93</b>	Phase I RI Skeet/Trap Range	170K	
	RA USTs USMA/STAS	378K	\$548K
<b>FY 94</b>	Phase I RI Crow's Nest	85K	
	Phase I RI 4 Landfill	245K	
	Phase I RI 10 Landfill	314K	
	Phase II RI Skeet and Trap Range	25K	
	IRD/FS 6 Landfill	428K	
	Program Management	150K	\$1,247K
<b>FY 95</b>	RFA 4 Landfill	56K	
	RFA 10 Landfill	27K	
	Phase II RI Skeet and Trap Range	18K	
	Phase II RI 6 Landfill	145K	
	IRA 6 Landfill/10 Landfill	391K	
	Program Management	95K	\$732K
<b>FY 96</b>	RFA 4 Landfill	16K	
	RFI 10 Landfill	135K	
	RFI 6 Landfill	16K	
	IRA 10 Landfill/6 Landfill	665K	
	CMS Michie Lots	174K	
	CMS Post School Landfill	137K	
	CMS Bulk Funding (S&R)	14K	
	Program Management	95K	\$1,252K
<b>FY 97</b>	RFI 10 Landfill	37K	
	IRA 6 Landfill (Lot F)	35K	
	IRA 10 Landfill	312K	
	CMS Motorpool Landfill	134K	
	CMS Motorpool East Landfill	84K	
	CMS Post School Landfill	116K	
	CMS Michie Lot Landfills	26K	
	CMS Ski Slope Landfills	98K	
	CMS Skeet & Trap Range	25K	
	CMI Post School Landfill	362K	
	Program Management	87K	\$1,316K

<b>FY 98</b>	Corps S&R for Motorpool Landfill	49K	
	Michie Lots C, E & F CMS mod w/Corps S&R	370K	
	Corps S&R for Motorpool East Landfill	15K	
	Corps S&R Ski Slope Landfill	25K	
	Post School Landfill CMI Corps S&A	83K	
	Michie Lots C, E, & F Landfills CMI	851K	
	Michie Lots A&B (CMS)	38K	
	LTM 10 Landfill	70K	
	Program Management and Miscellaneous Project Funding	99K	\$1,600K
<b>FY 99</b>	Motor Pool Landfill (CMI)	1,410K	
	Ski Slope Lot Landfill (S&R for CMS)	13K	
	Motorpool East Landfill (S&R for CMS)	13K	
	Michie Lot Landfills C, E & F Phase II (S&R for CMS)	15K	
	Michie Lot Landfills A&B (S&R for CMS)	8K	
	STAS UST @ Bldg 2308 (IRA)	128K	
	Michie Lots C, E & F Drainage Construction (CMI)	396K	
	Program Management	95K	
	Ski Slope Lot Landfill (CMI)	167K	\$2,245K
<b>FY00</b>	Michie Lots A & B Design	54K	
	STAS UST Removal	10K	
	Michie Lots C, E & F Construction, Phase II, Priority II	1,881K	
	Michie Lots C, E & F S & A	52K	
	Ski Slope Construction (CMI)	301K	
	Motorpool East Construction (CMI)	539K	
	Program Management	35K	
	Michie Lot F Repair	2K	\$2,874K
<b>FY 01</b>	Stormwater Piping Vic Michie Parking Lots	39K	
	Michie Lots A&B (Design)	5K	
	Michie Lots A&B Construction (CMI)	538K	
	Ski Slope Construction (CMI)	30K	
	Motorpool Landfill Construction (CMI)	146K	
	Long Term Monitoring	131K	
	Program Management	39K	\$928K
<b>FY02</b>	Motorpool East (LTM)	28K	
	Michie Lot A (LTM)	10K	
	Michie Lot C (LTM)	12K	
	Michie Lot D (LTM)	33K	
	Michie Lot E (LTM)	33K	
	Michie Lot F (LTM)	42K	
	Organic Compost (LTM)	9K	

<b>FY02</b>	High School (LTM)	4K	
	No. 706 Parking Lot (LTM)	4K	
	Ski Slope (LTM)	23K	
	Post School (LTM)	20K	
	Motorpool Landfill (LTM)	67K	
	Camp Buckner (LTM)	9K	
	PX (LTM)	32K	
	Program Management	50K	\$376K
<b>FY03</b>	WSTPT-16 (LTM)	9.954K	
	WSTPT-10 (LTM)	7.805K	
	WSTPT-09 (LTM)	4.225K	
	WSTPT-11 (LTM)	29.525K	
	WSTPT-7A (LTM)	30.507K	
	WSTPT-06 (LTM)	36.781K	
	WSTPT-01 (LTM)	1.47K	
	WSTPT-35A (LTM)	3.225K	
	WSTPT-48 (LTM)	1.155K	
	S&R	5.013K	
	WSTPT-11 (LTM)	3K	
	WSTPT-12 (LTM)	1K	
	WSTPT-13 (LTM)	3K	
	WSTPT-57 (LTM)	197K	
	Basewide monitoring	45K	
	Other (LTM)	4K	\$384K
<b>FY04</b>	LTM - all sites	38.K	
	LTM Well Repair	18K	
	WSTPT-16 Cap Paving	56K	
	Landfill Cap Maintenance	66K	
	Leachate Collection System Repair	5K	
	S&A USACE	16K	\$200K

**Total Prior Year Funding:** \$14,493,000

## CURRENT YEAR FUNDING

FY05: \$216,000

## FUTURE YEAR FUNDING

**TOTAL FUTURE REQUIREMENTS:** \$8,604,000

**TOTAL IRP PROGRAM COSTS:** \$23,313,000

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## Community Involvement

West Point has a relatively small installation restoration program without significant issues that warrant the establishment of a RAB. The West Point community consists of approximately 10,000 military personnel and their family members, civilian personnel, and cadets. The Town of Highlands, which adjoins West Point to the south, has a population of 13,600.

During the investigation phase of an off-post landfill on the Village of Highland Falls property, initial communication led to a project briefing to the school board concerning the impact on O'Neill High School. The presentation offered the reasons for performing the investigation, described the field techniques and addressed the board members' questions and concerns. The presentation was well received and established an excellent working relationship with the school board. Notification to the school board of subsequent remedial activities was provided through telephone calls, information papers and informal meetings.

A Community Relations Council has been formalized where any future planned remedial actions can be presented. The Engineering/Public Works Subcommittee of the Community Relations Council is chaired by the USMA Director of Public Works and consists of local village and town officials, town historian and interested citizens. This committee provides the ideal forum for representing planned remedial activities, which could affect the community without establishing a RAB.

On post, West Point has established residential Mayor's Meetings. Each residential area has an elected mayor who represents that community's interest and conveys its concerns to local command. These community meetings also provide an excellent forum to present and discuss future remedial activities that may affect the local community. The availability of these two operating public forums and the limited remedial actions planned at USMA limit the need to establish a RAB at West Point.

# US Military Academy West Point

## MILITARY MUNITIONS RESPONSE PROGRAM



***AEDB-R SITES/SITES RC:*** 12/0

***AEDB-R SITE TYPES:***

10      Unexploded Munitions/Ordnance  
2        Small Arms Range

***CONTAMINANTS OF CONCERN:*** MEC, MC

***MEDIA OF CONCERN:*** Soil

***COMPLETED REM/IRA/RA:*** None

***IDENTIFIED POSSIBLE REM/IRA/RA:*** RA at WSTPT-001-R-01, 012, 017

***TOTAL ER,A FUNDING:***

PRIOR YEAR	\$71,000
CURRENT	\$444,425
FUTURE	\$16,834,000

***DURATION OF MMRP:***

Year of MMRP Inception: 2002  
Year of RA Completion: 2014  
Year of MMRP Completion: 2047

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## MMRP Contamination Assessment

The Phase 3 Army Range Inventory was completed at USMA in FY03. The inventory identified twelve sites as eligible for the MMRP. The Phase 3 Inventory serves as the Preliminary Assessment under CERCLA. Site Inspections are scheduled for FY05.

### *Previous Studies*

#### **2004**

- Malcolm Pirnie; Closed, Transferring and Transferred Range/Site Inventory Report: US Military Academy West Point and Stewart Army Subpost, New York, August

# US Military Academy West Point

## MILITARY MUNITIONS RESPONSE PROGRAM

### SITE DESCRIPTIONS

# WSTPT-001-R-01

## ARTILLERY FIRING RANGE

### SITE DESCRIPTION

This range is made up of three firing ranges: Sacred Heart Cemetery Range, Silver Depository Range, and Adolph's Pond Range. The ranges were used for practice firing of 75mm rounds beginning in 1909 and continuing until the late 1930s. Most firing was aimed toward Crows Nest. The firing points are located to the southwest of the main campus. The range fan extends from the firing points into Crows Nest. The Artillery Firing Range fan also falls upon an area that may include an impact area for munitions from a second source: a cannon and projectile foundry located at Cold Spring. The Artillery Firing Range covers an area located directly north of an elementary school building. The elementary school was constructed in 1934 and construction of the West Point School Gym, which is currently underway, was started in 2002. Parrott rounds have been discovered, probably fired from the Cold Spring Foundry or from the south, on-post Civil War era artillery ranges. The total area of this closed range is 171 acres. Recovered items from an intrusive investigation of this area conducted during an Engineering Evaluation/Cost Analysis in July 2002 by Parsons, included UXO, OE scrap, and non-OE scrap. Items found included 75mm projectiles, six-inch MK 34 projectiles, 16 inch cannon balls, inert PTTF 1907-M fuzes, 75mm HE and ejection rounds and fuzes.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** High

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201109
RD .....	201210 .....	201304
RA(C) .....	201305 .....	201409
LTM .....	201710 .....	204709

**RC Expected: 201409**

# WSTPT-003-R-01

## BATTERY KNOX

### SITE DESCRIPTION

This battery was established sometime between 1836 and 1860. It was located on property that is now a parking lot between Lincoln Hall (Building 607) and Building 609. Battery Knox is located on the shore of the Hudson River and fired to the southeast across the Hudson River. Battery Knox encompasses 6 acres on the West Point Reservation. This battery contained six gun positions and ammunitions magazines. The original armament of Battery Knox is unknown, however, during the Civil War era, four 10" Rodman Rifles on coastal carriages were installed at the Battery for training purposes and used during the war. Practice firings were conducted from Battery Knox, and ammunition was stored there. A salute was fired from Battery Knox commemorating the surrender of General Lee's Army at Appomattox on April 10, 1865. When the Rodman cannon became outdated they were retained at Battery Knox, and the Battery apparently became a "ceremonial" or "salute" battery. Battery Knox was demolished sometime during the World War II era. It was used until around 1940. Three of the cannons remain on their siege carriages at USMA (located near the Ordnance Compound) under the Stewardship of the West Point Museum, and one cannon was transferred to the U.S. National Park Service and is currently located at Fort Point in San Francisco. There have not been any documented UXO findings or UXO responses in this area.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201209

**RC Expected: 201209**

# WSTPT-004-R-01

## BATTERY KNOX-TD

### SITE DESCRIPTION

This portion of the Battery Knox extends over the Hudson River and to the east shore of the River. The site is considered a transferred range for the inventory because the area is not owned or managed by the Army. The range fan extends to the southeast of the firing point. The total area of the transferred area for Battery Knox is 81 acres. Any artillery fired from Battery Knox during the early 1800s would be found within this range fan. There have not been any documented UXO findings or UXO responses in this area.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

<b>PHASES</b>	<b>Start</b>	<b>End</b>
PA .....	200212 .....	200308
SI .....	200405 .....	200607

**RC Expected: 200607**

# WSTPT-007-R-01

## BUFFALO SOLDIER FIELD

### SITE DESCRIPTION

The athletic field, formerly called Cavalry Plain, was rededicated as Buffalo Soldier Field in 1973. Buffalo Soldier Field honors the African American army troops of the 9th and 10th U.S. Cavalry regiments who were called “Buffalo Soldiers” by their Indian opponents during their service on the western frontier. These soldiers were first assigned to West Point in 1907 in support of cadet riding instruction and mounted drill and remained there until they were deactivated in 1946. Buffalo Soldier Field is located across the street from the Hotel Thayer and has a total area of 16 acres. The field is used for various intramural sports. There have not been any documented UXO findings or UXO responses in this area.

### STATUS

**RAC Score:** Negligible

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

<b>PHASES</b>	<b>Start</b>	<b>End</b>
PA .....	200212 .....	200308
SI .....	200405 .....	200607

**RC Expected: 200607**

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

WSTPT-008-R-01  
FORT CLINTON

SITE DESCRIPTION

Fort Clinton (known as Fort Arnold prior to Arnold’s treason in September 1780) was constructed in 1778 on the eastern periphery of USMA. A September 5, 1780 report stated that Fort Arnold contained one brass four-pounder on a traveling carriage and 11 brass mortars of various sizes, one iron 24-pounder on a garrison carriage, six iron 18-pounders on garrison carriages, and one iron 12-pounder on a stocked (field) carriage. All of the river batteries would have contained an immediately available supply of ammunition. These batteries did not fire a shot during wartime, however practice firings were routinely performed. This defensive position was abandoned at the end of the Revolutionary War. The fort was then renamed to Fort Clinton. During later years, Fort Clinton, also known as Camp Clinton, was used for the practice firing of 75 mm guns at Crows Nest (FUDS). Firing practice from Fort Clinton occurred from the mid 1800s until 1927. Fort Clinton is located in the central portion of the campus along the Hudson River shoreline. The battery was used for training and fired to the northeast across the Hudson River through the 1830s. The portion of the Fort Clinton firing fan that is not overlapped by Siege Battery is 27 acres. The battery no longer exists except for a short segment of the eastern parapet wall that survives today. The site, as of 1927, became a monument and historic landscape. There have not been any documented UXO responses in this area.

CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

**STATUS**

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201109

**RC Expected: 201109**



# WSTPT-010-R-01

## GREY GHOST HOUSING AREA

### SITE DESCRIPTION

This residential area was an old machine gun range later used for .45 cal pistol firing, and small arms target practice. Use of this range occurred between 1920 and 1940. Direction of fire occurred to the southwest. The buffer zone was bounded as follows: "Coast Artillery Hangar to junction of Round Pond pipe-line trail to Storm King Highway, to Redoubt No. 4, to Delafield Pond, thence back to Coast Artillery Hangar". The Grey Ghost Housing Area is located in the central campus area to the west of the batteries and athletic field, and is adjacent to and slightly overlapped by operational range area. The area is 18 acres. There have not been any documented UXO responses in this area.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** Negligible

**CONTAMINANTS:** MC (lead)

**MEDIA OF CONCERN:** Soil

<b>PHASES</b>	<b>Start</b>	<b>End</b>
PA .....	200212 .....	200308
SI .....	200405 .....	200607

**RC Expected: 200607**

# WSTPT-011-R-01

## NORTH ATHLETIC FIELD

### SITE DESCRIPTION

The North Athletic Field site was constructed from fill from Target Hill and therefore could contain ordnance that was fired into the hill from the early 1900s until the late 1930s. Target Hill was also a target for artillery fired from Cold Spring Foundry. In 1937 the Army Athletic Association started the project of building/expanding athletic fields. By removing Target Hill, the dirt could be used to fill out toward the river and create necessary fields. The removal was started in 1944, and was completed in 1945. As a result, approximately 60,000 square yards of level ground were added to the North Athletic Field. The site of the athletic field prior to 1944 was used for recreational purposes and was not the site of artillery firing. The Athletic field is located along the shore of the Hudson River. It is within the central campus area of the USMA. The athletic field is 14 acres. There have not been any documented UXO findings or UXO responses in this area.

### STATUS

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201109

**RC Expected: 201109**

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

# WSTPT-012-R-01

## POST OUTDOOR PISTOL RANGE

### SITE DESCRIPTION

This pistol range was a training and practice area for .45 cal pistols. Firing occurred here from 1930 until 1960. The range had 15, 25, and 50-yard firing lines. The range danger area was the “fenced area between Pipeline Trail and Michie Trail”. It was built in the early 1930s and remained in existence until around 1953. The outdoor pistol range is located in the central portion of the installation, to the south of the main campus area. It is located nearly ¾ of a mile inland from the Hudson River. The Post Outdoor Pistol range covers 22 acres of land within the installation boundaries and is currently undeveloped. The Post Outdoor Pistol Range is slightly overlapped by operational range area. The firing point and the berm were located within the closed range area. There have not been any documented UXO findings or UXO responses in this area.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** Negligible

**CONTAMINANTS:** MC (Lead)

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201109
RD .....	201210 .....	201304
RA(C) .....	201305 .....	201409

**RC Expected: 201409**

# WSTPT-013-R-01

## SEACOAST BATTERY

### SITE DESCRIPTION

This battery was constructed sometime between 1836 and 1860 immediately north of the North Dock Landing. An 1885 photograph of the Battery, which was always known as the Seacoast Battery, depicts a variety of Civil War-era coastal artillery pieces, and various mortars, along with powder magazines and firing positions. The Civil War-era guns remained at the Seacoast Battery, although photographs suggest that they were augmented with more modern artillery pieces. A 1929 inventory noted that the Seacoast Battery contained one 15” muzzle-loading seacoast rifle, Model 1884. Live firing and practice firing was conducted from the Seacoast Battery and ammunition was stored there, One 24-pounder, a British piece captured during the War of 1812, served in the Seacoast Battery for almost 40 years and was fired 1,000 times while at the academy. The Battery continued to be used until the 1940s. Sometime during the World War II era the Seacoast Battery was demolished, and the guns are believed to have been turned into a World War II scrap drive. No traces of the Seacoast Battery survive; its location is currently used as the North Dock Parking Lot. The Seacoast Battery and its firing fan cover 2 acres (that are not covered by other range fans) within installation boundaries. There have not been any documented UXO findings or UXO responses in this area.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607

**RC Expected: 200607**

# WSTPT-015-R-01

## SEIGE BATTERY

### SITE DESCRIPTION

Siege Battery was constructed sometime between 1836 and 1860 on the site of Battery Sherburne, at what today is called Trophy Point. The original Battery Sherburne was built in 1778, and contained two iron six-pounders on garrison carriages, and eight iron six-pounders on stocked or field carriages. Six-pounders are solid metal artillery pieces that do not contain any explosive material. Construction of Siege Battery is believed to have destroyed all traces of the Battery Sherburne. The Siege Battery contained a north and south battery. The north battery was used for various mortars, and the south battery was used for coastal artillery pieces. Practice firing occurred here from 1846 until 1940. During the latter part of the 19th century, the north Siege battery was renamed Battery Schofield. Training in the use of Parrott rifles was conducted at Battery Schofield. Around 1900, two six-inch disappearing coastal defense batteries were added to Battery Schofield. Live ammunition is known to have been stored at Battery Schofield. Sometime during the World War II era Battery Schofield was demolished and the guns were given to a scrap drive. No traces of Siege Battery survive, but the locations of the two six-inch disappearing carriage guns are prominent east of Trophy Point. Siege Battery and its associated firing fan cover 179 acres within installation boundaries. A portion of the Siege Battery firing fan overlaps the firing fans of Seacoast Battery and Fort Clinton. Research and actual investigation results, prepared under the FUDS program, were used to determine the extent of range fans. A large portion of the area is currently used for historic monuments. There have not been any documented UXO findings or UXO responses in this area.

### STATUS

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201109

**RC Expected: 201109**

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

# WSTPT-016-R-01

## SEIGE BATTERY-TD

### SITE DESCRIPTION

This portion of the Siege Battery extends over the Hudson River. The site is considered a transferred range for the inventory because the area is not owned or managed by the Army. The firing fan would contain any mortars fired from the Siege Battery beginning in the 1830s and continuing until the 1940s. The transferred portion of the firing fan for Siege Battery covers 1,014 acres. There have not been any documented UXO findings or UXO responses in this area. The transferred portions of Fort Clinton, Seacoast Battery, and Siege Battery are shown on the maps as one contiguous area.

### CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

### STATUS

**RAC Score:** Serious

**CONTAMINANTS:** MEC, MC

**MEDIA OF CONCERN:** Soil

<b>PHASES</b>	<b>Start</b>	<b>End</b>
PA .....	200212 .....	200308
SI .....	200405 .....	200607

**RC Expected: 200607**

WSTPT-017-R-01  
TARGET HILL

SITE DESCRIPTION

The Target Hill was used by cadets firing short-range artillery into the hill from the early 1900s until the late 1930s. It was also used for artillery fired from Cold Spring Foundry. It began being used as a firing target in 1812 and continued to be used until the 1930s. In 1940, a proposal came to remove this Target Hill and use the removed soil to construct needed athletic fields. The construction and excavation began in 1944. It is possible; however, that there are munitions related materials in the surrounding area that were not removed when the North Athletic Field excavation occurred. The target hill is located to the north of the Athletic Field within the main campus area, and is along the Hudson River shore. It covers 14 acres within installation boundaries. No records exist of any findings that occurred during the excavation. Since that time there have not been any documented UXO findings or UXO responses in this area.

STATUS

**RAC Score:** High  
**CONTAMINANTS:** MEC, MC  
**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200212 .....	200308
SI .....	200405 .....	200607
RI/FS .....	201010 .....	201209
RD .....	201210 .....	201304
RA(C) .....	201305 .....	201409
LTM .....	201710 .....	204709
RC Expected: 201409		

CLEANUP STRATEGY

Site investigation is underway and will determine strategy/remediation (funded FY05).

## PAST MILESTONES

MMRP Start Date: 2002

## PROJECTED MILESTONES

*ROD/DD Approval Dates:* 2014

*Construction Completion:* 2014

*Completion Date of all RA(C) Activities:* 2014

*Completion Date of IRP (including LTM phase):* 2047



# USMA MMRP SCHEDULE

(Based on current funding constraints)

AEDB-R#	PHASE	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
WSTPT-001-R-01	RIFS										
	RD										
	RAC										
	LTM										204709
WSTPT-003-R-01	RIFS										
WSTPT-008-R-01	RIFS										
WSTPT-011-R-01	RIFS										
WSTPT-012-R-01	RIFS										
	RD										
	RAC										
WSTPT-015-R-01	RIFS										
WSTPT-017-R-01	RIFS										
	RD										
	RAC										
	LTM										204709

**PRIOR YEAR FUNDING**

\$71,000

**CURRENT YEAR FUNDING**

FY05: \$444,425

**FUTURE YEAR FUNDING**

***TOTAL FUTURE REQUIREMENTS:*** \$16,834,000

***TOTAL MMRP PROGRAM COSTS:*** \$17,349,425